

*Estimated Total Annual Responses:*  
15,000.

*Estimated Time per Response:* 8  
minutes.

*Estimated Total Annual Burden*  
Hours: 2,000.

Dated: August 3, 2010.

**Tracey Denning,**

*Agency Clearance Officer, U.S. Customs and  
Border Protection.*

[FR Doc. 2010-19481 Filed 8-5-10; 8:45 am]

BILLING CODE 9111-14-P

## DEPARTMENT OF HOMELAND SECURITY

### U.S. Customs and Border Protection; Notice of Issuance of Final Determination Concerning a Certain Unified Communications Solution

**AGENCY:** U.S. Customs and Border  
Protection, Department of Homeland  
Security.

**ACTION:** Notice of final determination.

**SUMMARY:** This document provides  
notice that U.S. Customs and Border  
Protection ("CBP") has issued a final  
determination concerning the country of  
origin of a certain unified  
communications solution. Based upon  
the facts presented, CBP has concluded  
in the final determination that the  
United States is the country of origin of  
the unified communications solution for  
purposes of U.S. government  
procurement.

**DATES:** The final determination was  
issued on August 2, 2010. A copy of the  
final determination is attached. Any  
party-at-interest, as defined in 19 CFR  
177.22(d), may seek judicial review of  
this final determination within 30 days  
from date of publication in the **Federal  
Register**.

**FOR FURTHER INFORMATION CONTACT:**  
Alison Umberger, Valuation and Special  
Programs Branch: (202) 325-0267.

**SUPPLEMENTARY INFORMATION:** Notice is  
hereby given that on August 2, 2010,  
pursuant to subpart B of part 177,  
Customs Regulations (19 CFR part 177,  
subpart B), CBP issued a final  
determination concerning the country of  
origin of the unified communications  
solution which may be offered to the  
U.S. Government under an  
undesignated government procurement  
contract. This final determination, in  
HQ H090115, was issued at the request  
of Avaya Inc. under procedures set forth  
at 19 CFR part 177, subpart B, which  
implements Title III of the Trade  
Agreements Act of 1979, as amended  
(19 U.S.C. 2511-18). In the final  
determination, CBP has concluded that,

based upon the facts presented, the  
unified communications solution,  
assembled, installed and programmed in  
the United States using subassemblies  
made in China and Israel, and software  
developed in the United States, is  
substantially transformed in the United  
States, such that the United States is the  
country of origin of the finished article  
for purposes of U.S. government  
procurement.

Section 177.29, Customs Regulations  
(19 CFR 177.29), provides that notice of  
final determinations shall be published  
in the **Federal Register** within 60 days  
of the date the final determination is  
issued. Section 177.30, CBP Regulations  
(19 CFR 177.30), provides that any  
party-at-interest, as defined in 19 CFR  
177.22(d), may seek judicial review of a  
final determination within 30 days of  
publication of such determination in the  
**Federal Register**.

Dated: August 2, 2010.

**Sandra L. Bell,**

*Executive Director, Regulations and Rulings,  
Office of International Trade.*

#### Attachment

#### HQ H090115

August 2, 2010

OT:RR:CTF:VS H090115 ARU

CATEGORY: Marking

Mr. Stuart P. Seidel, Baker & McKenzie LLP,  
815 Connecticut Avenue, NW.,  
Washington, DC 20006-4078, USA

RE: U.S. Government Procurement; Title III,  
Trade Agreements Act of 1979 (19 U.S.C.  
§ 2511); Subpart B, Part 177, CBP  
Regulations; Avaya Unified  
Communications Solution  
("Communication Manager")

Dear Mr. Seidel: This is in response to your  
letter dated December 29, 2009, requesting a  
final determination on behalf of Avaya Inc.  
("Avaya"), pursuant to subpart B of part 177,  
Customs and Border Protection ("CBP")  
Regulations (19 CFR § 177.21 *et seq.*).  
Pursuant to our request, you provided  
additional information during a meeting on  
March 5, 2010.

Under the pertinent regulations, which  
implement Title III of the Trade Agreements  
Act of 1979, as amended (19 U.S.C. § 2511 *et  
seq.*), CBP issues country of origin advisory  
rulings and final determinations as to  
whether an article is or would be a product  
of a designated country or instrumentality for  
the purpose of granting waivers of certain  
"Buy American" restrictions in U.S. law or  
practice for products offered for sale to the  
U.S. Government.

This final determination concerns the  
country of origin of an Avaya Unified  
Communications Solution known as  
"Communication Manager." We note that  
Avaya is a party-at-interest within the  
meaning of 19 CFR § 177.22(d)(1) and is  
entitled to request this final determination. In  
addition, we have reviewed and granted the  
importer's request for confidentiality

pursuant to section 177.2(b)(7) of the  
Customs Regulations chapter 19, with respect  
to certain information submitted.

#### FACTS:

The end product at issue is a Unified  
Communications Solution which is made up  
of numerous electronic components that are  
assembled and integrated at an end user's  
premises in the United States using software  
known as "Communication Manager." *Communication Manager* is the IP telephony  
software foundation on which Avaya delivers  
unified communications to large and small  
enterprises. It can control and expand a  
system from fewer than 100 users to as many  
as 36,000 users on a single system to more  
than one million users on a single network.  
You state that the programming, assembly  
and installation of a system will typically  
take approximately one month to complete.

It is stated that *Communication Manager*  
adds functionality to certain individual  
components and changes functionality of  
other components. Although each  
installation at an end user's premises is  
different, due to the end user's needs, each  
system will consist of at least the following  
components: server, media gateways, circuit  
packs, and internet protocol ("IP") telephone  
sets. Avaya's *Communication Manager*  
software is developed and tested exclusively  
by Avaya in Denver, Colorado. *Communication Manager* is designed to run  
on a variety of Linux-based media servers.  
Linux is an open source operating system.  
*Communication Manager* provides  
centralized call control for a resilient,  
distributed network of media gateways and a  
wide range of analog, digital, and IP-based  
communication devices. It also has several  
advanced built-in applications, including  
mobility applications, call center features,  
advanced conference calling, and enhanced  
emergency 9-1-1 capabilities. *Communication Manager* is the foundation  
for building complete enterprise  
communication networks by supporting SIP,  
H.323, and other industry-standard  
communications protocols over a variety of  
different networks. This protocol support  
provides centralized voice mail, attendant  
operations, and call centers across multiple  
locations.

#### A. Hardware

1. Media Servers: Each *Communication  
Solution* consists of one or more media  
servers. Some servers are in the form of  
blades. These are cards (similar to printed  
circuit cards with components) that are fit or  
assembled into Media Gateways, while others  
are standalone units.

2. Media Gateways: You describe three  
models of Media Gateways.

i. G250 Media Gateway: a powerful branch  
communication solution that packs an IP  
telephony gateway, an advanced IP WAN  
router, a VPN gateway and a high-  
performance LAN switch into a compact, 2U  
high 19" rack unit.

ii. G350 Media Gateway: a powerful  
converged networking solution that packs an  
IP telephony gateway, an advanced IP WAN  
router, a VPN Gateway, and a high-  
performance LAN switch into a compact (3U)  
modular chassis.

iii. G450 Media Gateway: consists of a 3U high, 19" rack mountable chassis with field-removable Supervisor Main Board Module, Power Supplies, Fan Tray, DSP resources and memory.

3. Circuit Packs: A circuit pack, also known as a circuit card, circuit board, or printed circuit, is an electronic circuit consisting of one or more electronic components arranged on a substrate board or card with one of more conductive layers laminated on one or more insulating layers. The electronic components on the circuit pack can be inserted into holes or surface mounted on conductive pads using various alloys of metal called solder. Such circuit packs usually leave one or more connectors to integrate them into the system of which they are a part. Avaya's circuit packs are not stand-alone devices. They are inserted as components to Avaya's Media Gateway units. Avaya offers two types of circuit packs—a "TN" card and an "MM" card. TN circuit packs are based on older technology for use in legacy telephony systems, also called Telephone Interface Cards. MM circuit packs are based on newer technology, also called Media Modules.

4. Telephone Sets: Internet Protocol ("IP") telephones that before integration through Communication Manager have no functionality.

#### B. Software

You claim that the integration of the individual components is achieved through the use of software called Communication Manager, which adds functionality to certain individual components and changes functionality of the other components. Avaya's Communication Manager software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of Communication Manager. All the engineering, development, and design were developed in the United States; however, a small percentage of the ongoing software development takes place abroad.

#### C. Assembly

##### 1. Operations in China:

There are 6 main subassemblies that compose the Communication Manager solution. Subassemblies made in China include: Gateways, Servers, Media Modules, Telsets, and Circuit Packs. The hardware listed above is manufactured in China. The raw components for the hardware are obtained from various countries throughout Asia and Europe. Certain gateways are also manufactured in Israel and other countries, but will eventually be manufactured in China.

##### 2. Operations in the United States:

All the engineering, development, design were developed in the United States. Communication Manager will be installed onto a solid state drive or hard drive residing on the server. It will be custom configured at the end user's facility or another location in the United States to integrate the various components. Although each installation at an end user's premises is different, due to the

end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs, and IP telephone sets. Once actual installation begins, approximately five (5) days is needed to customize the Communication Manager software for the end user. A total of 11 days is required to assemble the necessary equipment, install the hardware, and integrate the hardware and software. The complex installation and integration requires both adjustments to hardware and customized software programming. You claim that due to the number of components assembled, number of different operations, time, skill level required, attention to detail, quality control, the value added to the Communication Manager, and the overall employment complexity in development of the software, the hardware is substantially transformed when the software is added and the system is integrated.

#### ISSUE:

What is the country of origin of Communication Manager Units for purposes of U.S. Government procurement?

#### LAW AND ANALYSIS:

Pursuant to subpart B of Part 177, 19 CFR § 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended ("TAA" 19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations on whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth at 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also, 19 C.F.R. § 177.22(a).

In rendering advisory rulings and final determinations for purposes of U.S. Government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Procurement Regulations. See 19 C.F.R. § 177.21. In this regard, CBP recognizes that the Federal Procurement Regulations restrict the U.S. Government's purchase of products to U.S.-made or designated country end products for acquisitions subject to the TAA. See 48 C.F.R. § 25.403(c)(1).

The Federal Acquisition Regulations define "U.S.-made end product" as:

an article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. 48 C.F.R. § 25.003.

In order to determine whether a substantial transformation occurs when components of various origins are assembled to form completed articles, CBP considers the totality of the circumstances and makes such decisions on a case-by-case basis. The country of origin of the article's components, the extent of the processing that occurs within a given country, and whether such processing renders a product with a new name, character, and use are primary considerations in such cases. Additionally, facts such as resources expended on product design and development, extent and nature of post-assembly inspection procedures, and worker skill required during the actual manufacturing process will be considered when analyzing whether a substantial transformation has occurred; however, no one such factor is determinative.

With respect to the product under consideration in the instant case, we note that CBP has not previously considered whether the components at issue are substantially transformed when brought together in the manner set forth above. However, CBP has considered whether components of various origins have been substantially transformed during the assembly of related products. Though such rulings may not be directly on point with the facts under consideration in the instant case, the guidance supplied by such cases may nonetheless be applied to resolve the issues presently before us. The determination will be in this instance "a mixed question of technology and customs law, mostly the latter." *Texas Instruments, Inc. v. United States*, 681 F.2d 778, 783 (C.C.P.A. 1982).

You claim that, "[i]n \* \* \* rulings involving hardware which lacked the functional 'intelligence' characteristics present in the completed product, and where the firmware/software provided the merchandise's functionality, CBP determined that the products were substantially transformed into products of the country where the software which provided its functionality was installed and final testing occurred." We disagree with the scope of this statement. While the location of the software installation and testing is one factor to be considered, it is not the sole determinant. The country in which the software development takes place is also relevant.

In *Data General v. United States*, 4 CIT 182 (1982), the court determined that for purposes of determining eligibility under item 807.00, Tariff Schedules of the United States, the programming of a foreign PROM (Programmable Read-Only Memory chip) substantially transformed the PROM into a U.S. article. In programming the imported PROMs, the U.S. engineers systematically caused various distinct electronic interconnections to be formed within each integrated circuit. The programming bestowed upon each circuit its electronic function. That is, its "memory" which could be retrieved. A distinct physical change was effected in the PROM by the opening or closing of the fuses, depending on the method of programming. This physical alteration, not visible to the naked eye, could be discerned by electronic testing of the PROM. The court noted that the programs

were designed by a project engineer with many years of experience in "designing and building hardware." While replicating the program pattern from a "master" PROM may be a quick one-step process, the development of the pattern and the production of the "master" PROM required much time and expertise. The court noted that it was undisputed that programming alters the character of a PROM. The essence of the article, its interconnections or stored memory, was established by programming. The court concluded that altering the non-functioning circuitry comprising a PROM through technological expertise in order to produce a functioning read only memory device possessing a desired distinctive circuit pattern was no less a "substantial transformation" than the manual interconnection of transistors, resistors and diodes upon a circuit board creating a similar pattern.

In C.S.D. 84-86, CBP stated:

We are of the opinion that the rationale of the court in the *Data General* case may be applied in the present case to support the principle that the essence of an integrated circuit memory storage device is established by programming \* \* \*. [We are of the opinion that the programming (or reprogramming) of an EPROM results in a new and different article of commerce which would be considered to be a product of the country where the programming or reprogramming takes place.

Accordingly, the programming of a device that changes or defines its use generally constitutes substantial transformation. See also HQ 733085, dated July 13, 1990; and HQ 558868, dated February 23, 1995 (programming of SecureID Card substantially transforms the card because it gives the card its character and use as part of a security system and the programming is a permanent change that cannot be undone); HQ 735027, dated September 7, 1993 (programming blank media (EEPROM) with instructions on it that allows it to perform certain functions of preventing piracy of software constituted substantial transformation); but see HQ 732870, dated March 19, 1990 (formatting a blank diskette did not constitute substantial transformation because it did not add value, did not involve complex or highly technical operations and did not create a new or different product); HQ 734518, dated June 28, 1993 (concluding that motherboards were not substantially transformed by the implanting of the central processing unit on the board because, whereas in *Data General* use was being assigned to the PROM, the use of the motherboard had already been determined when the importer imported it).

In HQ 563012, dated May 4, 2004, CBP considered whether components of various origins were substantially transformed when assembled to form a fabric switch which involved a combination of computer hardware and software. Most of the assembly of computer hardware was performed in China. Then, in either Hong Kong or the U.S., the hardware was completed and the U.S.-origin software was downloaded onto the hardware. CBP noted that the U.S.-developed software provided the finished product with its "distinctive functional characteristics." In

making the determination that the product was substantially transformed in the United States, where the fabric switch was assembled to completion, CBP considered both the assembly process that occurred in the United States and the configuration operations that required U.S.-origin software. In the scenario where the fabric switch was assembled to completion in Hong Kong, CBP determined the origin for marking purposes was Hong Kong.

In HQ 559255, dated August 21, 1995, a device referred to as a "CardDock" was under consideration for country of origin marking purposes. The CardDock was a device which was installed in IBM PC compatible computers. After installation, the units were able to accept PCMCIA cards for the purpose of interfacing such PCMCIA cards with the computer in which the CardDock unit was installed. The CardDock units were partially assembled abroad but completed in the United States. The overseas processing included manufacturing the product's injection molded plastic frame and installing integrated circuits onto a circuit board along with various diodes, resistors and capacitors. After such operations, these items were shipped to the United States for further processing that included mating a U.S.-origin circuit board to the foreign-origin frame and board. The assembled units were thereafter subjected to various testing procedures. In consideration of the foregoing, CBP held that the foreign-origin components, i.e., the ISA boards, frame assemblies and connector cables, were substantially transformed when assembled to completion in the United States. In finding that the name, character, and use of the foreign-origin components had changed during processing in the United States, CBP noted that the components had lost their separate identity during assembly and had become an integral part of a new and distinct item which was visibly different from any of the individual foreign-origin components.

In HQ 735027, dated September 7, 1993, a device that software companies used to protect their software from piracy was under consideration for country of origin marking purposes. The device, referred to as the "MemoPlug," was assembled in Israel from parts that were obtained from Taiwan (such as various connectors and an Electronically Erasable Programmable Read Only Memory, or "EEPROM") and Israel (such as an internal circuit board). After assembly, these components were shipped to a processing facility in the United States where the EEPROM was programmed with special software. Such processing in the United States accounted for approximately 50 percent of the final selling price of the MemoPlugs. In finding that the foreign-origin components were substantially transformed in the United States, CBP noted that the U.S. processing transformed a blank media, the EEPROM, into a device that performed functions necessary to the prevention of software piracy.

We make our determinations based on the totality of the circumstances. Here, we take particular note of the fact that the installation of the Communication Manager software adds functionality to certain individual

components and changes functionality of other components. This software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of the software. In addition, assembly and installation of the hardware components that make up the Avaya Communication Solution will typically take approximately one month to complete and are performed in the United States. While the subassemblies are manufactured in China and Israel, all of the initial engineering, development, and design were developed in the United States.

Based upon the above precedents and the totality of the circumstances, we find that there is a substantial transformation of the component parts in the United States, the location where the final assembly and installation of the hardware as well as the application of the Communication Manager software occur. It follows that we find the country of origin for government procurement purposes is the United States.

#### **HOLDING:**

Based on the facts provided, the assembly, installation, and programming operations performed in the United States impart the essential character to Communication Manager. As such, Communication Manager will be considered a product of the United States for the purpose of government procurement.

Notice of this final determination will be given in the Federal Register as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Any party-at-interest may, within 30 days after publication of the Federal Register notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

**Sandra L. Bell,**

*Executive Director, Regulations and Rulings,  
Office of International Trade.*

[FR Doc. 2010-19363 Filed 8-5-10; 8:45 am]

**BILLING CODE P**

## **DEPARTMENT OF HOMELAND SECURITY**

### **Federal Emergency Management Agency**

[Internal Agency Docket No. FEMA-1928-DR; Docket ID FEMA-2010-0002]

### **Iowa; Major Disaster and Related Determinations**

**AGENCY:** Federal Emergency Management Agency, DHS.

**ACTION:** Notice.

**DEPARTMENT OF HOMELAND SECURITY**  
**U.S. CUSTOMS AND BORDER PROTECTION**  
**NOTICE OF ISSUANCE OF FINAL DETERMINATION CONCERNING A**  
**CERTAIN UNIFIED COMMUNICATIONS SOLUTION**

**AGENCY:** U.S. Customs and Border Protection, Department of Homeland Security.

**ACTION:** Notice of final determination.

**SUMMARY:** This document provides notice that U.S. Customs and Border Protection ("CBP") has issued a final determination concerning the country of origin of a certain unified communications solution. Based upon the facts presented, CBP has concluded in the final determination that the United States is the country of origin of the unified communications solution for purposes of U.S. government procurement.

**DATE:** The final determination was issued on . A copy of the final determination is attached. Any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of this final determination within 30 days from date of publication in the *Federal Register*.

**FOR FURTHER INFORMATION CONTACT:** Alison Umberger, Valuation and Special Programs Branch: (202) 325-0267.

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that on , pursuant to subpart B of part 177, Customs Regulations (19 C.F.R. part 177, subpart B), CBP issued a final determination concerning the country of origin of the unified communications solution which may be offered to the U.S.

Government under an undesignated government procurement contract. This final determination, in HQ H090115, was issued at the request of Avaya Inc. under procedures set forth at 19 C.F.R. part 177, subpart B, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511–18). In the final determination, CBP has concluded that, based upon the facts presented, the unified communications solution, assembled, installed and programmed in the United States using subassemblies made in China and Israel, and software developed in the United States, is substantially transformed in the United States, such that the United States is the country of origin of the finished article for purposes of U.S. government procurement.

Section 177.29, Customs Regulations (19 C.F.R. § 177.29), provides that notice of final determinations shall be published in the *Federal Register* within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 C.F.R. § 177.30), provides that any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the *Federal Register*.

**DATED:**

Sandra L. Bell  
Executive Director  
Regulations and Rulings  
Office of International Trade

Attachment

**HQ H090115**

**OT:RR:CTF:VS**     H090115 ARU

**CATEGORY:**        Marking

Mr. Stuart P. Seidel  
Baker & McKenzie LLP  
815 Connecticut Avenue, NW  
Washington, DC 20006-4078, USA

**RE:**    U.S. Government Procurement; Title III, Trade Agreements Act of 1979 (19 U.S.C. § 2511); Subpart B, Part 177, CBP Regulations; Avaya Unified Communications Solution ("*Communication Manager*")

Dear Mr. Seidel:

This is in response to your letter dated December 29, 2009, requesting a final determination on behalf of Avaya Inc. ("Avaya"), pursuant to subpart B of part 177, Customs and Border Protection ("CBP") Regulations (19 C.F.R. § 177.21 et seq.). Pursuant to our request, you provided additional information during a meeting on March 5, 2010.

Under the pertinent regulations, which implement Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purpose of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

This final determination concerns the country of origin of an Avaya Unified Communications Solution known as "Communication Manager." We note that Avaya is a party-at-interest within the meaning of 19 C.F.R. § 177.22(d)(1) and is entitled to request this final determination. In addition, we have reviewed and granted the importer's request for confidentiality pursuant to section 177.2(b)(7) of the Customs Regulations chapter 19, with respect to certain information submitted.

## **FACTS:**

The end product at issue is a Unified Communications Solution which is made up of numerous electronic components that are assembled and integrated at an end user's premises in the United States using software known as "Communication Manager." Communication Manager is the IP telephony software foundation on which Avaya delivers unified communications to large and small enterprises. It can control and expand a system from fewer than 100 users to as many as 36,000 users on a single system to more than one million users on a single network. You state that the programming, assembly and installation of a system will typically take approximately one month to complete.

It is stated that Communication Manager adds functionality to certain individual components and changes functionality of other components. Although each installation at an end user's premises is different, due to the end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs, and internet protocol ("IP") telephone sets. Avaya's Communication Manager software is developed and tested exclusively by Avaya in Denver, Colorado. Communication Manager is designed to run on a variety of Linux-based media servers. Linux is an open source operating system. Communication Manager provides centralized call control for a resilient, distributed network of media gateways and a wide range of analog, digital, and IP-based communication devices. It also has several advanced built-in applications, including mobility applications, call center features, advanced conference calling, and enhanced emergency 9-1-1 capabilities. Communication Manager is the foundation for building complete enterprise communication networks by supporting SIP, H.323, and other industry-standard communications protocols over a variety of different networks. This protocol support provides centralized voice mail, attendant operations, and call centers across multiple locations.

### **A. Hardware**

1. Media Servers: Each Communication Solution consists of one or more media servers. Some servers are in the form of blades. These are cards (similar to printed circuit cards with components) that are fit or assembled into Media Gateways, while others are standalone units.
2. Media Gateways: You describe three models of Media Gateways.
  - i. G250 Media Gateway: a powerful branch communication solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN gateway and a high-performance LAN switch into a compact, 2U high 19" rack unit.

- ii. G350 Media Gateway: a powerful converged networking solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN Gateway, and a high-performance LAN switch into a compact (3U) modular chassis.
  - iii. G450 Media Gateway: consists of a 3U high, 19" rack mountable chassis with field-removable Supervisor Main Board Module, Power Supplies, Fan Tray, DSP resources and memory.
3. Circuit Packs: A circuit pack, also known as a circuit card, circuit board, or printed circuit, is an electronic circuit consisting of one or more electronic components arranged on a substrate board or card with one of more conductive layers laminated on one or more insulating layers. The electronic components on the circuit pack can be inserted into holes or surface mounted on conductive pads using various alloys of metal called solder. Such circuit packs usually leave one or more connectors to integrate them into the system of which they are a part. Avaya's circuit packs are not stand-alone devices. They are inserted as components to Avaya's Media Gateway units. Avaya offers two types of circuit packs – a "TN" card and an "MM" card. TN circuit packs are based on older technology for use in legacy telephony systems, also called Telephone Interface Cards. MM circuit packs are based on newer technology, also called Media Modules.
4. Telephone Sets: Internet Protocol ("IP") telephones that before integration through Communication Manager have no functionality.

**B. Software**

You claim that the integration of the individual components is achieved through the use of software called Communication Manager, which adds functionality to certain individual components and changes functionality of the other components. Avaya's Communication Manager software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of Communication Manager. All the engineering, development, and design were developed in the United States; however, a small percentage of the ongoing software development takes place abroad.

**C. Assembly**

**1. Operations in China:**

There are 6 main subassemblies that compose the Communication Manager solution. Subassemblies made in China include: Gateways, Servers, Media Modules, Telsets, and Circuit Packs. The hardware listed above is manufactured in China. The raw components for the hardware are obtained from various countries throughout Asia and Europe. Certain gateways are also manufactured in Israel and other countries, but will eventually be manufactured in China.

**2. Operations in the United States:**

All the engineering, development, design were developed in the United States. Communication Manager will be installed onto a solid state drive or hard drive residing on the server. It will be custom configured at the end user's facility or another location in the United States to integrate the various components. Although each installation at an end user's premises is different, due to the end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs, and IP telephone sets. Once actual installation begins, approximately five (5) days is needed to customize the Communication Manager software for the end user. A total of 11 days is required to assemble the necessary equipment, install the hardware, and integrate the hardware and software. The complex installation and integration requires both adjustments to hardware and customized software programming. You claim that due to the number of components assembled, number of different operations, time, skill level required, attention to detail, quality control, the value added to the Communication Manager, and the overall employment complexity in development of the software, the hardware is substantially transformed when the software is added and the system is integrated.

**ISSUE:**

What is the country of origin of Communication Manager Units for purposes of U.S. Government procurement?

**LAW AND ANALYSIS:**

Pursuant to subpart B of Part 177, 19 C.F.R. § 177.21 et seq., which implements Title III of the Trade Agreements Act of 1979, as amended ("TAA"; 19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations on whether an article is or would be a product of a designated

country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth at 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also, 19 C.F.R. § 177.22(a).

In rendering advisory rulings and final determinations for purposes of U.S. Government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Procurement Regulations. See 19 C.F.R. § 177.21. In this regard, CBP recognizes that the Federal Procurement Regulations restrict the U.S. Government's purchase of products to U.S.-made or designated country end products for acquisitions subject to the TAA. See 48 C.F.R. § 25.403(c)(1).

The Federal Acquisition Regulations define "U.S.-made end product" as:

an article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. 48 C.F.R. § 25.003.

In order to determine whether a substantial transformation occurs when components of various origins are assembled to form completed articles, CBP considers the totality of the circumstances and makes such decisions on a case-by-case basis. The country of origin of the article's components, the extent of the processing that occurs within a given country, and whether such processing renders a product with a new name, character, and use are primary considerations in such cases. Additionally, facts such as resources expended on product design and development, extent and nature of post-assembly inspection procedures, and worker skill required during the actual manufacturing process will be considered when analyzing whether a substantial transformation has occurred; however, no one such factor is determinative.

With respect to the product under consideration in the instant case, we note that CBP has not previously considered whether the components at issue are substantially transformed when brought together in the manner set forth above. However, CBP has considered whether components of various origins have been substantially transformed during the assembly of related products. Though such rulings may not be directly on point with the facts under consideration in the instant case, the guidance supplied by such cases may nonetheless be applied to resolve the issues presently before us. The determination will be in this instance "a mixed question of technology and customs law, mostly the latter." Texas Instruments, Inc. v. United States, 681 F.2d 778, 783 (C.C.P.A. 1982).

You claim that, "[i]n ... rulings involving hardware which lacked the functional 'intelligence' characteristics present in the completed product, and where the firmware/software provided the merchandise's functionality, CBP determined that the products were substantially transformed into products of the country where the software which provided its functionality was installed and final testing occurred." We disagree with the scope of this statement. While the location of the software installation and testing is one factor to be considered, it is not the sole determinant. The country in which the software development takes place is also relevant.

In Data General v. United States, 4 CIT 182 (1982), the court determined that for purposes of determining eligibility under item 807.00, Tariff Schedules of the United States, the programming of a foreign PROM (Programmable Read-Only Memory chip) substantially transformed the PROM into a U.S. article. In programming the imported PROMs, the U.S. engineers systematically caused various distinct electronic interconnections to be formed within each integrated circuit. The programming bestowed upon each circuit its electronic function. That is, its "memory" which could be retrieved. A distinct physical change was effected in the PROM by the opening or closing of the fuses, depending on the method of programming. This physical alteration, not visible to the naked eye, could be discerned by electronic testing of the PROM. The court noted that the programs were designed by a project engineer with many years of experience in "designing and building hardware." While replicating the program pattern from a "master" PROM may be a quick one-step process, the development of the pattern and the production of the "master" PROM required much time and expertise. The court noted that it was undisputed that programming alters the character of a PROM. The essence of the article, its interconnections or stored memory, was established by programming. The court concluded that altering the non-functioning circuitry comprising a PROM through technological expertise in order to produce a functioning read only memory device possessing a desired distinctive circuit pattern was no less a "substantial transformation" than the manual interconnection of transistors, resistors and diodes upon a circuit board creating a similar pattern.

In C.S.D. 84-86, CBP stated:

We are of the opinion that the rationale of the court in the *Data General* case may be applied in the present case to support the principle that the essence of an integrated circuit memory storage device is established by programming . . . . [W]e are of the opinion that the programming (or reprogramming) of an EPROM results in a new and different article of commerce which would be considered to be a product of the country where the programming or reprogramming takes place.

Accordingly, the programming of a device that changes or defines its use generally constitutes substantial transformation. See also HQ 733085, dated July 13, 1990; and HQ 558868, dated February 23, 1995 (programming of SecureID Card substantially transforms the card because it gives the card its character and use as part of a security system and the programming is a permanent change that cannot be undone); HQ 735027, dated September 7, 1993 (programming blank media (EEPROM) with instructions on it that allows it to perform certain functions of preventing piracy of software constituted substantial transformation); but see HQ 732870, dated March 19, 1990 (formatting a blank diskette did not constitute substantial transformation because it did not add value, did not involve complex or highly technical operations and did not create a new or different product); HQ 734518, dated June 28, 1993 (concluding that motherboards were not substantially transformed by the implanting of the central processing unit on the board because, whereas in *Data General* use was being assigned to the PROM, the use of the motherboard had already been determined when the importer imported it).

In HQ 563012, dated May 4, 2004, CBP considered whether components of various origins were substantially transformed when assembled to form a fabric switch which involved a combination of computer hardware and software. Most of the assembly of computer hardware was performed in China. Then, in either Hong Kong or the U.S., the hardware was completed and the U.S.-origin software was downloaded onto the hardware. CBP noted that the U.S.-developed software provided the finished product with its "distinctive functional characteristics." In making the determination that the product was substantially transformed in the United States, where the fabric switch was assembled to completion, CBP considered both the assembly process that occurred in the United States and the configuration operations that required U.S.-origin software. In the scenario where the fabric switch was assembled to completion in Hong Kong, CBP determined the origin for marking purposes was Hong Kong.

In HQ 559255, dated August 21, 1995, a device referred to as a "CardDock" was under consideration for country of origin marking purposes. The CardDock was a device which was installed in IBM PC compatible computers. After installation, the units were able to accept PCMCIA cards for the purpose of interfacing such PCMCIA cards with the computer in which the CardDock unit was installed. The CardDock units were partially assembled abroad but completed in the United States. The overseas processing included manufacturing the product's injection molded plastic frame and installing integrated circuits onto a circuit board along with various diodes, resistors and capacitors. After such operations, these items were shipped to the United States for further processing that included mating a U.S.-origin circuit board to the foreign-origin frame and board. The assembled units were thereafter subjected to various testing procedures. In consideration of the foregoing, CBP held that the foreign-origin components, i.e., the ISA boards, frame assemblies and connector cables, were substantially transformed when assembled to completion in the United States. In finding that the name, character, and use of the foreign-origin components had changed during processing in the United States, CBP noted that the components had lost their separate identity during assembly and had become an integral part of a new and distinct item which was visibly different from any of the individual foreign-origin components.

In HQ 735027, dated September 7, 1993, a device that software companies used to protect their software from piracy was under consideration for country of origin marking purposes. The device, referred to as the "MemoPlug," was assembled in Israel from parts that were obtained from Taiwan (such as various connectors and an Electronically Erasable Programmable Read Only Memory, or "EEPROM") and Israel (such as an internal circuit board). After assembly, these components were shipped to a processing facility in the United States where the EEPROM was programmed with special software. Such processing in the United States accounted for approximately 50 percent of the final selling price of the MemoPlugs. In finding that the foreign-origin components were substantially transformed in the United States, CBP noted that the U.S. processing transformed a blank media, the EEPROM, into a device that performed functions necessary to the prevention of software piracy.

We make our determinations based on the totality of the circumstances. Here, we take particular note of the fact that the installation of the Communication Manager software adds functionality to certain individual components and changes functionality of other components. This software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of the software. In addition, assembly and installation of the hardware components that make up the Avaya Communication Solution will typically take approximately one month to complete and are performed in the United States. While the subassemblies are

manufactured in China and Israel, all of the initial engineering, development, and design were developed in the United States.

Based upon the above precedents and the totality of the circumstances, we find that there is a substantial transformation of the component parts in the United States, the location where the final assembly and installation of the hardware as well as the application of the Communication Manager software occur. It follows that we find the country of origin for government procurement purposes is the United States.

**HOLDING:**

Based on the facts provided, the assembly, installation, and programming operations performed in the United States impart the essential character to Communication Manager. As such, Communication Manager will be considered a product of the United States for the purpose of government procurement.

Notice of this final determination will be given in the Federal Register as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Any party-at-interest may, within 30 days after publication of the Federal Register notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Sandra L. Bell, Executive Director  
Regulations and Rulings  
Office of International Trade

**DEPARTMENT OF HOMELAND SECURITY**  
**U.S. CUSTOMS AND BORDER PROTECTION**  
**NOTICE OF ISSUANCE OF FINAL DETERMINATION CONCERNING A**  
**CERTAIN UNIFIED COMMUNICATIONS SOLUTION**

**AGENCY:** U.S. Customs and Border Protection, Department of Homeland Security.

**ACTION:** Notice of final determination.

**SUMMARY:** This document provides notice that U.S. Customs and Border Protection ("CBP") has issued a final determination concerning the country of origin of a certain unified communications solution. Based upon the facts presented, CBP has concluded in the final determination that the United States is the country of origin of the unified communications solution for purposes of U.S. government procurement.

**DATE:** The final determination was issued on August 2, 2010. A copy of the final determination is attached. Any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of this final determination within 30 days from date of publication in the *Federal Register*.

**FOR FURTHER INFORMATION CONTACT:** Alison Umberger, Valuation and Special Programs Branch: (202) 325-0267.

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that on August 2, 2010, pursuant to subpart B of part 177, Customs Regulations (19 C.F.R. part 177, subpart B), CBP issued a final determination concerning the country of origin of the unified communications solution which may be offered to the U.S.

Government under an undesignated government procurement contract. This final determination, in HQ H090115, was issued at the request of Avaya Inc. under procedures set forth at 19 C.F.R. part 177, subpart B, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511–18). In the final determination, CBP has concluded that, based upon the facts presented, the unified communications solution, assembled, installed and programmed in the United States using subassemblies made in China and Israel, and software developed in the United States, is substantially transformed in the United States, such that the United States is the country of origin of the finished article for purposes of U.S. government procurement.

Section 177.29, Customs Regulations (19 C.F.R. § 177.29), provides that notice of final determinations shall be published in the *Federal Register* within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 C.F.R. § 177.30), provides that any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the *Federal Register*.

**DATED:** August 2, 2010

  
Sandra L. Bell  
Executive Director  
Regulations and Rulings  
Office of International Trade

Attachment



**U.S. Customs and  
Border Protection**

**AUG 02 2010**

**HQ H090115**

**OT:RR:CTF:VS**      H090115 ARU

**CATEGORY:**          Marking

Mr. Stuart P. Seidel  
Baker & McKenzie LLP  
815 Connecticut Avenue, NW  
Washington, DC 20006-4078, USA

**RE:**    U.S. Government Procurement; Title III, Trade Agreements Act of 1979  
         (19 U.S.C. § 2511); Subpart B, Part 177, CBP Regulations; Avaya Unified  
         Communications Solution ("*Communication Manager*")

Dear Mr. Seidel:

This is in response to your letter dated December 29, 2009, requesting a final determination on behalf of Avaya Inc. ("Avaya"), pursuant to subpart B of part 177, Customs and Border Protection ("CBP") Regulations (19 C.F.R. § 177.21 et seq.). Pursuant to our request, you provided additional information during a meeting on March 5, 2010.

Under the pertinent regulations, which implement Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purpose of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

This final determination concerns the country of origin of an Avaya Unified Communications Solution known as "Communication Manager." We note that Avaya is a party-at-interest within the meaning of 19 C.F.R. § 177.22(d)(1) and is entitled to request this final determination. In addition, we have reviewed and granted the importer's request for confidentiality pursuant to section 177.2(b)(7) of the Customs Regulations chapter 19, with respect to certain information submitted.

## **FACTS:**

The end product at issue is a Unified Communications Solution which is made up of numerous electronic components that are assembled and integrated at an end user's premises in the United States using software known as "Communication Manager." Communication Manager is the IP telephony software foundation on which Avaya delivers unified communications to large and small enterprises. It can control and expand a system from fewer than 100 users to as many as 36,000 users on a single system to more than one million users on a single network. You state that the programming, assembly and installation of a system will typically take approximately one month to complete.

It is stated that Communication Manager adds functionality to certain individual components and changes functionality of other components. Although each installation at an end user's premises is different, due to the end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs, and internet protocol ("IP") telephone sets. Avaya's Communication Manager software is developed and tested exclusively by Avaya in Denver, Colorado. Communication Manager is designed to run on a variety of Linux-based media servers. Linux is an open source operating system. Communication Manager provides centralized call control for a resilient, distributed network of media gateways and a wide range of analog, digital, and IP-based communication devices. It also has several advanced built-in applications, including mobility applications, call center features, advanced conference calling, and enhanced emergency 9-1-1 capabilities. Communication Manager is the foundation for building complete enterprise communication networks by supporting SIP, H.323, and other industry-standard communications protocols over a variety of different networks. This protocol support provides centralized voice mail, attendant operations, and call centers across multiple locations.

### **A. Hardware**

1. Media Servers: Each Communication Solution consists of one or more media servers. Some servers are in the form of blades. These are cards (similar to printed circuit cards with components) that are fit or assembled into Media Gateways, while others are standalone units.
2. Media Gateways: You describe three models of Media Gateways.
  - i. G250 Media Gateway: a powerful branch communication solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN gateway and a high-performance LAN switch into a compact, 2U high 19" rack unit.

- ii. G350 Media Gateway: a powerful converged networking solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN Gateway, and a high-performance LAN switch into a compact (3U) modular chassis.
  - iii. G450 Media Gateway: consists of a 3U high, 19" rack mountable chassis with field-removable Supervisor Main Board Module, Power Supplies, Fan Tray, DSP resources and memory.
3. Circuit Packs: A circuit pack, also known as a circuit card, circuit board, or printed circuit, is an electronic circuit consisting of one or more electronic components arranged on a substrate board or card with one of more conductive layers laminated on one or more insulating layers. The electronic components on the circuit pack can be inserted into holes or surface mounted on conductive pads using various alloys of metal called solder. Such circuit packs usually leave one or more connectors to integrate them into the system of which they are a part. Avaya's circuit packs are not stand-alone devices. They are inserted as components to Avaya's Media Gateway units. Avaya offers two types of circuit packs – a "TN" card and an "MM" card. TN circuit packs are based on older technology for use in legacy telephony systems, also called Telephone Interface Cards. MM circuit packs are based on newer technology, also called Media Modules.
4. Telephone Sets: Internet Protocol ("IP") telephones that before integration through Communication Manager have no functionality.

**B. Software**

You claim that the integration of the individual components is achieved through the use of software called Communication Manager, which adds functionality to certain individual components and changes functionality of the other components. Avaya's Communication Manager software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of Communication Manager. All the engineering, development, and design were developed in the United States; however, a small percentage of the ongoing software development takes place abroad.

**C. Assembly**

**1. Operations in China:**

There are 6 main subassemblies that compose the Communication Manager solution. Subassemblies made in China include: Gateways, Servers, Media Modules, Telsets, and Circuit Packs. The hardware listed above is manufactured in China. The raw components for the hardware are obtained from various countries throughout Asia and Europe. Certain gateways are also manufactured in Israel and other countries, but will eventually be manufactured in China.

**2. Operations in the United States:**

All the engineering, development, design were developed in the United States. Communication Manager will be installed onto a solid state drive or hard drive residing on the server. It will be custom configured at the end user's facility or another location in the United States to integrate the various components. Although each installation at an end user's premises is different, due to the end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs, and IP telephone sets. Once actual installation begins, approximately five (5) days is needed to customize the Communication Manager software for the end user. A total of 11 days is required to assemble the necessary equipment, install the hardware, and integrate the hardware and software. The complex installation and integration requires both adjustments to hardware and customized software programming. You claim that due to the number of components assembled, number of different operations, time, skill level required, attention to detail, quality control, the value added to the Communication Manager, and the overall employment complexity in development of the software, the hardware is substantially transformed when the software is added and the system is integrated.

**ISSUE:**

What is the country of origin of Communication Manager Units for purposes of U.S. Government procurement?

**LAW AND ANALYSIS:**

Pursuant to subpart B of Part 177, 19 C.F.R. § 177.21 et seq., which implements Title III of the Trade Agreements Act of 1979, as amended ("TAA"; 19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations on whether an article is or would be a product of a designated

country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth at 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also, 19 C.F.R. § 177.22(a).

In rendering advisory rulings and final determinations for purposes of U.S. Government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Procurement Regulations. See 19 C.F.R. § 177.21. In this regard, CBP recognizes that the Federal Procurement Regulations restrict the U.S. Government's purchase of products to U.S.-made or designated country end products for acquisitions subject to the TAA. See 48 C.F.R. § 25.403(c)(1).

The Federal Acquisition Regulations define "U.S.-made end product" as:

an article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. 48 C.F.R. § 25.003.

In order to determine whether a substantial transformation occurs when components of various origins are assembled to form completed articles, CBP considers the totality of the circumstances and makes such decisions on a case-by-case basis. The country of origin of the article's components, the extent of the processing that occurs within a given country, and whether such processing renders a product with a new name, character, and use are primary considerations in such cases. Additionally, facts such as resources expended on product design and development, extent and nature of post-assembly inspection procedures, and worker skill required during the actual manufacturing process will be considered when analyzing whether a substantial transformation has occurred; however, no one such factor is determinative.

With respect to the product under consideration in the instant case, we note that CBP has not previously considered whether the components at issue are substantially transformed when brought together in the manner set forth above. However, CBP has considered whether components of various origins have been substantially transformed during the assembly of related products. Though such rulings may not be directly on point with the facts under consideration in the instant case, the guidance supplied by such cases may nonetheless be applied to resolve the issues presently before us. The determination will be in this instance "a mixed question of technology and customs law, mostly the latter." Texas Instruments, Inc. v. United States, 681 F.2d 778, 783 (C.C.P.A. 1982).

You claim that, "[i]n ... rulings involving hardware which lacked the functional 'intelligence' characteristics present in the completed product, and where the firmware/software provided the merchandise's functionality, CBP determined that the products were substantially transformed into products of the country where the software which provided its functionality was installed and final testing occurred." We disagree with the scope of this statement. While the location of the software installation and testing is one factor to be considered, it is not the sole determinant. The country in which the software development takes place is also relevant.

In Data General v. United States, 4 CIT 182 (1982), the court determined that for purposes of determining eligibility under item 807.00, Tariff Schedules of the United States, the programming of a foreign PROM (Programmable Read-Only Memory chip) substantially transformed the PROM into a U.S. article. In programming the imported PROMs, the U.S. engineers systematically caused various distinct electronic interconnections to be formed within each integrated circuit. The programming bestowed upon each circuit its electronic function. That is, its "memory" which could be retrieved. A distinct physical change was effected in the PROM by the opening or closing of the fuses, depending on the method of programming. This physical alteration, not visible to the naked eye, could be discerned by electronic testing of the PROM. The court noted that the programs were designed by a project engineer with many years of experience in "designing and building hardware." While replicating the program pattern from a "master" PROM may be a quick one-step process, the development of the pattern and the production of the "master" PROM required much time and expertise. The court noted that it was undisputed that programming alters the character of a PROM. The essence of the article, its interconnections or stored memory, was established by programming. The court concluded that altering the non-functioning circuitry comprising a PROM through technological expertise in order to produce a functioning read only memory device possessing a desired distinctive circuit pattern was no less a "substantial transformation" than the manual interconnection of transistors, resistors and diodes upon a circuit board creating a similar pattern.

In C.S.D. 84-86, CBP stated:

We are of the opinion that the rationale of the court in the *Data General* case may be applied in the present case to support the principle that the essence of an integrated circuit memory storage device is established by programming . . . [W]e are of the opinion that the programming (or reprogramming) of an EPROM results in a new and different article of commerce which would be considered to be a product of the country where the programming or reprogramming takes place.

Accordingly, the programming of a device that changes or defines its use generally constitutes substantial transformation. See also HQ 733085, dated July 13, 1990; and HQ 558868, dated February 23, 1995 (programming of SecureID Card substantially transforms the card because it gives the card its character and use as part of a security system and the programming is a permanent change that cannot be undone); HQ 735027, dated September 7, 1993 (programming blank media (EEPROM) with instructions on it that allows it to perform certain functions of preventing piracy of software constituted substantial transformation); but see HQ 732870, dated March 19, 1990 (formatting a blank diskette did not constitute substantial transformation because it did not add value, did not involve complex or highly technical operations and did not create a new or different product); HQ 734518, dated June 28, 1993 (concluding that motherboards were not substantially transformed by the implanting of the central processing unit on the board because, whereas in *Data General* use was being assigned to the PROM, the use of the motherboard had already been determined when the importer imported it).

In HQ 563012, dated May 4, 2004, CBP considered whether components of various origins were substantially transformed when assembled to form a fabric switch which involved a combination of computer hardware and software. Most of the assembly of computer hardware was performed in China. Then, in either Hong Kong or the U.S., the hardware was completed and the U.S.-origin software was downloaded onto the hardware. CBP noted that the U.S.-developed software provided the finished product with its "distinctive functional characteristics." In making the determination that the product was substantially transformed in the United States, where the fabric switch was assembled to completion, CBP considered both the assembly process that occurred in the United States and the configuration operations that required U.S.-origin software. In the scenario where the fabric switch was assembled to completion in Hong Kong, CBP determined the origin for marking purposes was Hong Kong.

In HQ 559255, dated August 21, 1995, a device referred to as a "CardDock" was under consideration for country of origin marking purposes. The CardDock was a device which was installed in IBM PC compatible computers. After installation, the units were able to accept PCMCIA cards for the purpose of interfacing such PCMCIA cards with the computer in which the CardDock unit was installed. The CardDock units were partially assembled abroad but completed in the United States. The overseas processing included manufacturing the product's injection molded plastic frame and installing integrated circuits onto a circuit board along with various diodes, resistors and capacitors. After such operations, these items were shipped to the United States for further processing that included mating a U.S.-origin circuit board to the foreign-origin frame and board. The assembled units were thereafter subjected to various testing procedures. In consideration of the foregoing, CBP held that the foreign-origin components, i.e., the ISA boards, frame assemblies and connector cables, were substantially transformed when assembled to completion in the United States. In finding that the name, character, and use of the foreign-origin components had changed during processing in the United States, CBP noted that the components had lost their separate identity during assembly and had become an integral part of a new and distinct item which was visibly different from any of the individual foreign-origin components.

In HQ 735027, dated September 7, 1993, a device that software companies used to protect their software from piracy was under consideration for country of origin marking purposes. The device, referred to as the "MemoPlug," was assembled in Israel from parts that were obtained from Taiwan (such as various connectors and an Electronically Erasable Programmable Read Only Memory, or "EEPROM") and Israel (such as an internal circuit board). After assembly, these components were shipped to a processing facility in the United States where the EEPROM was programmed with special software. Such processing in the United States accounted for approximately 50 percent of the final selling price of the MemoPlugs. In finding that the foreign-origin components were substantially transformed in the United States, CBP noted that the U.S. processing transformed a blank media, the EEPROM, into a device that performed functions necessary to the prevention of software piracy.

We make our determinations based on the totality of the circumstances. Here, we take particular note of the fact that the installation of the Communication Manager software adds functionality to certain individual components and changes functionality of other components. This software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of the software. In addition, assembly and installation of the hardware components that make up the Avaya Communication Solution will typically take approximately one month to complete and are performed in the United States. While the subassemblies are

manufactured in China and Israel, all of the initial engineering, development, and design were developed in the United States.

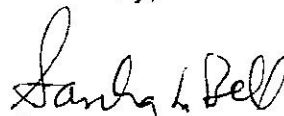
Based upon the above precedents and the totality of the circumstances, we find that there is a substantial transformation of the component parts in the United States, the location where the final assembly and installation of the hardware as well as the application of the Communication Manager software occur. It follows that we find the country of origin for government procurement purposes is the United States.

**HOLDING:**

Based on the facts provided, the assembly, installation, and programming operations performed in the United States impart the essential character to Communication Manager. As such, Communication Manager will be considered a product of the United States for the purpose of government procurement.

Notice of this final determination will be given in the Federal Register as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Any party-at-interest may, within 30 days after publication of the Federal Register notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,



Sandra L. Bell, Executive Director  
Regulations and Rulings  
Office of International Trade

**DEPARTMENT OF HOMELAND SECURITY**  
**U.S. CUSTOMS AND BORDER PROTECTION**  
**NOTICE OF ISSUANCE OF FINAL DETERMINATION CONCERNING A**  
**CERTAIN UNIFIED COMMUNICATIONS SOLUTION**

**AGENCY:** U.S. Customs and Border Protection, Department of Homeland Security.

**ACTION:** Notice of final determination.

**SUMMARY:** This document provides notice that U.S. Customs and Border Protection ("CBP") has issued a final determination concerning the country of origin of a certain unified communications solution. Based upon the facts presented, CBP has concluded in the final determination that the United States is the country of origin of the unified communications solution for purposes of U.S. government procurement.

**DATE:** The final determination was issued on . A copy of the final determination is attached. Any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of this final determination within 30 days from date of publication in the *Federal Register*.

**FOR FURTHER INFORMATION CONTACT:** Alison Umberger, Valuation and Special Programs Branch: (202) 325-0267.

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that on , pursuant to subpart B of part 177, Customs Regulations (19 C.F.R. part 177, subpart B), CBP issued a final determination concerning the country of origin of the unified communications solution which may be offered to the U.S.

Government under an undesignated government procurement contract. This final determination, in HQ H090115, was issued at the request of Avaya Inc. under procedures set forth at 19 C.F.R. part 177, subpart B, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511–18). In the final determination, CBP has concluded that, based upon the facts presented, the unified communications solution, assembled, installed and programmed in the United States using subassemblies made in China and Israel, and software developed in the United States, is substantially transformed in the United States, such that the United States is the country of origin of the finished article for purposes of U.S. government procurement.

Section 177.29, Customs Regulations (19 C.F.R. § 177.29), provides that notice of final determinations shall be published in the *Federal Register* within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 C.F.R. § 177.30), provides that any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the *Federal Register*.

**DATED:**

Sandra L. Bell  
Executive Director  
Regulations and Rulings  
Office of International Trade

Attachment

(b) (6), (b) (2), (b) (5)



**HQ H090115**

**OT:RR:CTF:VS** H090115 ARU

**CATEGORY:** Marking

Mr. Stuart P. Seidel  
Baker & McKenzie LLP  
815 Connecticut Avenue, NW  
Washington, DC 20006-4078, USA

**RE:** U.S. Government Procurement; Title III, Trade Agreements Act of 1979 (19 U.S.C. § 2511); Subpart B, Part 177, CBP Regulations; Avaya Unified Communications Solution ("*Communication Manager*")

Dear Mr. Seidel:

This is in response to your letter dated December 29, 2009, requesting a final determination on behalf of Avaya Inc. ("Avaya"), pursuant to subpart B of part 177, Customs and Border Protection ("CBP") Regulations (19 C.F.R. § 177.21 et seq.). Pursuant to our request, you provided additional information during a meeting on March 5, 2010.

Under the pertinent regulations, which implement Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purpose of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

This final determination concerns the country of origin of an Avaya Unified Communications Solution known as "Communication Manager." We note that Avaya is a party-at-interest within the meaning of 19 C.F.R. § 177.22(d)(1) and is entitled to request this final determination. In addition, we have reviewed and granted the importer's request for confidentiality pursuant to section 177.2(b)(7) of the Customs Regulations chapter 19, with respect to certain information submitted.

## **FACTS:**

The end product at issue is a Unified Communications Solution which is made up of numerous electronic components that are assembled and integrated at an end user's premises in the United States using software known as "Communication Manager." Communication Manager is the IP telephony software foundation on which Avaya delivers unified communications to large and small enterprises. It can control and expand a system from fewer than 100 users to as many as 36,000 users on a single system to more than one million users on a single network. You state that the programming, assembly and installation of a system will typically take approximately one month to complete.

It is stated that Communication Manager adds functionality to certain individual components and changes functionality of other components. Although each installation at an end user's premises is different, due to the end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs, and internet protocol ("IP") telephone sets. Avaya's Communication Manager software is developed and tested exclusively by Avaya in Denver, Colorado. Communication Manager is designed to run on a variety of Linux-based media servers. Linux is an open source operating system. Communication Manager provides centralized call control for a resilient, distributed network of media gateways and a wide range of analog, digital, and IP-based communication devices. It also has several advanced built-in applications, including mobility applications, call center features, advanced conference calling, and enhanced emergency 9-1-1 capabilities. Communication Manager is the foundation for building complete enterprise communication networks by supporting SIP, H.323, and other industry-standard communications protocols over a variety of different networks. This protocol support provides centralized voice mail, attendant operations, and call centers across multiple locations.

### **A. Hardware**

1. Media Servers: Each Communication Solution consists of one or more media servers. Some servers are in the form of blades. These are cards (similar to printed circuit cards with components) that are fit or assembled into Media Gateways, while others are standalone units.
2. Media Gateways: You describe three models of Media Gateways.
  - i. G250 Media Gateway: a powerful branch communication solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN gateway and a high-performance LAN switch into a compact, 2U high 19" rack unit.

- ii. G350 Media Gateway: a powerful converged networking solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN Gateway, and a high-performance LAN switch into a compact (3U) modular chassis.
  - iii. G450 Media Gateway: consists of a 3U high, 19" rack mountable chassis with field-removable Supervisor Main Board Module, Power Supplies, Fan Tray, DSP resources and memory.
3. Circuit Packs: A circuit pack, also known as a circuit card, circuit board, or printed circuit, is an electronic circuit consisting of one or more electronic components arranged on a substrate board or card with one or more conductive layers laminated on one or more insulating layers. The electronic components on the circuit pack can be inserted into holes or surface mounted on conductive pads using various alloys of metal called solder. Such circuit packs usually leave one or more connectors to integrate them into the system of which they are a part. Avaya's circuit packs are not stand-alone devices. They are inserted as components to Avaya's Media Gateway units. Avaya offers two types of circuit packs – a "TN" card and an "MM" card. TN circuit packs are based on older technology for use in legacy telephony systems, also called Telephone Interface Cards. MM circuit packs are based on newer technology, also called Media Modules.
4. Telephone Sets: Internet Protocol ("IP") telephones that before integration through Communication Manager have no functionality.

**B. Software**

You claim that the integration of the individual components is achieved through the use of software called Communication Manager, which adds functionality to certain individual components and changes functionality of the other components. Avaya's Communication Manager software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of Communication Manager. All the engineering, development, and design were developed in the United States; however, a small percentage of the ongoing software development takes place abroad.

**C. Assembly**

**1. Operations in China:**

There are 6 main subassemblies that compose the Communication Manager solution. Subassemblies made in China include: Gateways, Servers, Media Modules, Telsets, and Circuit Packs. The hardware listed above is manufactured in China. The raw components for the hardware are obtained from various countries throughout Asia and Europe. Certain gateways are also manufactured in Israel and other countries, but will eventually be manufactured in China.

**2. Operations in the United States:**

All the engineering, development, design were developed in the United States. Communication Manager will be installed onto a solid state drive or hard drive residing on the server. It will be custom configured at the end user's facility or another location in the United States to integrate the various components. Although each installation at an end user's premises is different, due to the end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs, and IP telephone sets. Once actual installation begins, approximately five (5) days is needed to customize the Communication Manager software for the end user. A total of 11 days is required to assemble the necessary equipment, install the hardware, and integrate the hardware and software. The complex installation and integration requires both adjustments to hardware and customized software programming. You claim that due to the number of components assembled, number of different operations, time, skill level required, attention to detail, quality control, the value added to the Communication Manager, and the overall employment complexity in development of the software, the hardware is substantially transformed when the software is added and the system is integrated.

**ISSUE:**

What is the country of origin of Communication Manager Units for purposes of U.S. Government procurement?

**LAW AND ANALYSIS:**

Pursuant to subpart B of Part 177, 19 C.F.R. § 177.21 et seq., which implements Title III of the Trade Agreements Act of 1979, as amended ("TAA"; 19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations on whether an article is or would be a product of a designated

country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth at 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also, 19 C.F.R. § 177.22(a).

In rendering advisory rulings and final determinations for purposes of U.S. Government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Procurement Regulations. See 19 C.F.R. § 177.21. In this regard, CBP recognizes that the Federal Procurement Regulations restrict the U.S. Government's purchase of products to U.S.-made or designated country end products for acquisitions subject to the TAA. See 48 C.F.R. § 25.403(c)(1).

The Federal Acquisition Regulations define "U.S.-made end product" as:

an article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. 48 C.F.R. § 25.003.

In order to determine whether a substantial transformation occurs when components of various origins are assembled to form completed articles, CBP considers the totality of the circumstances and makes such decisions on a case-by-case basis. The country of origin of the article's components, the extent of the processing that occurs within a given country, and whether such processing renders a product with a new name, character, and use are primary considerations in such cases. Additionally, facts such as resources expended on product design and development, extent and nature of post-assembly inspection procedures, and worker skill required during the actual manufacturing process will be considered when analyzing whether a substantial transformation has occurred; however, no one such factor is determinative.

With respect to the product under consideration in the instant case, we note that CBP has not previously considered whether the components at issue are substantially transformed when brought together in the manner set forth above. However, CBP has considered whether components of various origins have been substantially transformed during the assembly of related products. Though such rulings may not be directly on point with the facts under consideration in the instant case, the guidance supplied by such cases may nonetheless be applied to resolve the issues presently before us. The determination will be in this instance "a mixed question of technology and customs law, mostly the latter." Texas Instruments, Inc. v. United States, 681 F.2d 778, 783 (C.C.P.A. 1982).

You claim that, "[i]n ... rulings involving hardware which lacked the functional 'intelligence' characteristics present in the completed product, and where the firmware/software provided the merchandise's functionality, CBP determined that the products were substantially transformed into products of the country where the software which provided its functionality was installed and final testing occurred." We disagree with the scope of this statement. While the location of the software installation and testing is one factor to be considered, it is not the sole determinant. The country in which the software development takes place is also relevant.

In Data General v. United States, 4 CIT 182 (1982), the court determined that for purposes of determining eligibility under item 807.00, Tariff Schedules of the United States, the programming of a foreign PROM (Programmable Read-Only Memory chip) substantially transformed the PROM into a U.S. article. In programming the imported PROMs, the U.S. engineers systematically caused various distinct electronic interconnections to be formed within each integrated circuit. The programming bestowed upon each circuit its electronic function. That is, its "memory" which could be retrieved. A distinct physical change was effected in the PROM by the opening or closing of the fuses, depending on the method of programming. This physical alteration, not visible to the naked eye, could be discerned by electronic testing of the PROM. The court noted that the programs were designed by a project engineer with many years of experience in "designing and building hardware." While replicating the program pattern from a "master" PROM may be a quick one-step process, the development of the pattern and the production of the "master" PROM required much time and expertise. The court noted that it was undisputed that programming alters the character of a PROM. The essence of the article, its interconnections or stored memory, was established by programming. The court concluded that altering the non-functioning circuitry comprising a PROM through technological expertise in order to produce a functioning read only memory device possessing a desired distinctive circuit pattern was no less a "substantial transformation" than the manual interconnection of transistors, resistors and diodes upon a circuit board creating a similar pattern.

In C.S.D. 84-86, CBP stated:

We are of the opinion that the rationale of the court in the *Data General* case may be applied in the present case to support the principle that the essence of an integrated circuit memory storage device is established by programming . . . . [W]e are of the opinion that the programming (or reprogramming) of an EPROM results in a new and different article of commerce which would be considered to be a product of the country where the programming or reprogramming takes place.

Accordingly, the programming of a device that changes or defines its use generally constitutes substantial transformation. See also HQ 733085, dated July 13, 1990; and HQ 558868, dated February 23, 1995 (programming of SecureID Card substantially transforms the card because it gives the card its character and use as part of a security system and the programming is a permanent change that cannot be undone); HQ 735027, dated September 7, 1993 (programming blank media (EEPROM) with instructions on it that allows it to perform certain functions of preventing piracy of software constituted substantial transformation); but see HQ 732870, dated March 19, 1990 (formatting a blank diskette did not constitute substantial transformation because it did not add value, did not involve complex or highly technical operations and did not create a new or different product); HQ 734518, dated June 28, 1993 (concluding that motherboards were not substantially transformed by the implanting of the central processing unit on the board because, whereas in *Data General* use was being assigned to the PROM, the use of the motherboard had already been determined when the importer imported it).

In HQ 563012, dated May 4, 2004, CBP considered whether components of various origins were substantially transformed when assembled to form a fabric switch which involved a combination of computer hardware and software. Most of the assembly of computer hardware was performed in China. Then, in either Hong Kong or the U.S., the hardware was completed and the U.S.-origin software was downloaded onto the hardware. CBP noted that the U.S.-developed software provided the finished product with its "distinctive functional characteristics." In making the determination that the product was substantially transformed in the United States, where the fabric switch was assembled to completion, CBP considered both the assembly process that occurred in the United States and the configuration operations that required U.S.-origin software. In the scenario where the fabric switch was assembled to completion in Hong Kong, CBP determined the origin for marking purposes was Hong Kong.

In HQ 559255, dated August 21, 1995, a device referred to as a "CardDock" was under consideration for country of origin marking purposes. The CardDock was a device which was installed in IBM PC compatible computers. After installation, the units were able to accept PCMCIA cards for the purpose of interfacing such PCMCIA cards with the computer in which the CardDock unit was installed. The CardDock units were partially assembled abroad but completed in the United States. The overseas processing included manufacturing the product's injection molded plastic frame and installing integrated circuits onto a circuit board along with various diodes, resistors and capacitors. After such operations, these items were shipped to the United States for further processing that included mating a U.S.-origin circuit board to the foreign-origin frame and board. The assembled units were thereafter subjected to various testing procedures. In consideration of the foregoing, CBP held that the foreign-origin components, i.e., the ISA boards, frame assemblies and connector cables, were substantially transformed when assembled to completion in the United States. In finding that the name, character, and use of the foreign-origin components had changed during processing in the United States, CBP noted that the components had lost their separate identity during assembly and had become an integral part of a new and distinct item which was visibly different from any of the individual foreign-origin components.

In HQ 735027, dated September 7, 1993, a device that software companies used to protect their software from piracy was under consideration for country of origin marking purposes. The device, referred to as the "MemoPlug," was assembled in Israel from parts that were obtained from Taiwan (such as various connectors and an Electronically Erasable Programmable Read Only Memory, or "EEPROM") and Israel (such as an internal circuit board). After assembly, these components were shipped to a processing facility in the United States where the EEPROM was programmed with special software. Such processing in the United States accounted for approximately 50 percent of the final selling price of the MemoPlugs. In finding that the foreign-origin components were substantially transformed in the United States, CBP noted that the U.S. processing transformed a blank media, the EEPROM, into a device that performed functions necessary to the prevention of software piracy.

We make our determinations based on the totality of the circumstances. Here, we take particular note of the fact that the installation of the Communication Manager software adds functionality to certain individual components and changes functionality of other components. This software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya began development of Communication Manager in 2002 and since that time has spent significant resources in the development and maintenance of the software. In addition, assembly and installation of the hardware components that make up the Avaya Communication Solution will typically take approximately one month to complete and are performed in the United States. While the subassemblies are

manufactured in China and Israel, all of the initial engineering, development, and design were developed in the United States.

Based upon the above precedents and the totality of the circumstances, we find that there is a substantial transformation of the component parts in the United States, the location where the final assembly and installation of the hardware as well as the application of the Communication Manager software occur. It follows that we find the country of origin for government procurement purposes is the United States.

**HOLDING:**

Based on the facts provided, the assembly, installation, and programming operations performed in the United States impart the essential character to Communication Manager. As such, Communication Manager will be considered a product of the United States for the purpose of government procurement.

Notice of this final determination will be given in the Federal Register as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Any party-at-interest may, within 30 days after publication of the Federal Register notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Sandra L. Bell, Executive Director  
Regulations and Rulings  
Office of International Trade

(b) (2), (b) (5), (b) (6)

